

CLAIM SET AS AMENDED

Claims 1-22 (Cancelled).

23. (Currently Amended) ~~A method of representing an object appearing in a still or video image, by processing signals corresponding to the image, the method comprising deriving a plurality of numerical values representing features appearing on the outline of an object and applying a scaling or non-linear transformation to said values to arrive at a representation of the~~
outline an image or a sequence of images, by processing signals corresponding to the image, the method comprising:

deriving a plurality of peak height coordinate values for peaks of an outline of the object in curvature scale space on the basis of the signals, and

applying a non-linear transformation to the peak height coordinate values to generate a representation of the outline.

24. (Currently Amended) ~~A method as claimed is claim 23 wherein said numerical values are substantially invariant to the scale of the outline~~ An apparatus adapted to implement a method as claimed in claim 1.

25. (Currently Amended) ~~A method as claimed is claim 23~~

~~wherein the number of said numerical values depends on the shape of the outline~~ A computer program for implementing a method as claimed in claim 1.

26. (Currently Amended) ~~A method as claimed in claim 23 wherein the scaling or non-linear transformation does not depend on the outline shape~~ A computer system programmed to operate according to a method as claimed in claim 1.

27. (Currently Amended) ~~A method as claimed in claim 23 wherein the numerical values reflect points of inflection on the outline~~ A computer-readable storage medium storing computer-executable process steps for implementing a method as claimed in claim 1.

Claims 28-50 (Canceled).

51. (New) A method for representing an object appearing in an image, comprising:

determining a curvature scale space representation for an object outline to generate a plurality of curves representative of said outline;

determining peaks and associated peak coordinates for said plurality of curves; and

generating a shape descriptor for said outline using a non-linear calculation applied to y-coordinate values of said peak coordinates.

52. (New) The method of claim 51, further comprising:
storing said shape descriptor as a description for said object in a memory.

53. (New) The method of claim 51, wherein said non-linear calculation being in the form of $y' = a * y^b + c$, where a, b, and c are predetermined constants.

54. (New) The method of claim 53, wherein b being greater than zero and less than 1.

55. (New) The method of claim 53, wherein b being greater than or equal to 0.25 and less than or equal to 0.75.

56. (New) A method for representing an object) appearing in an image, comprising:

determining a curvature scale space representation for an object outline to generate a plurality of curves representative of said outline;

determining peaks and associated peak coordinates for said plurality of curves; and

generating a shape descriptor for said outline using a scaling calculation applied to y-coordinate values of said peak coordinates.

57. (New) The method of claim 56, further comprising:
storing said shape descriptor as a description for said object in a memory.

58. (New) The method of claim 56, wherein said scaling calculation being in the form of $y' = a_0 + a_1*y$, where a_0 and a_1 are predetermined constants.

59. (New) The method of claim 58, wherein b being greater than zero and less than 1.

60. (New) The method of claim 58, wherein b being greater than or equal to 0.25 and less than or equal to 0.75.

61. (New) A method for representing an object appearing in an image, comprising:

determining a curvature scale space representation for an object outline to generate a plurality of curves representative of said outline;

determining peaks and associated peak coordinates for said plurality of curves using a binomial filter having at least three predetermined coefficients; and

generating a shape descriptor for said outline using a non-linear calculation applied to y-coordinate values of said peak coordinates.

62. (New) The method of claim 61, further comprising:

storing said shape descriptor as a description for said object in a memory.

63. (New) The method of claim 61, wherein said non-linear calculation being in the form of $y' = a * y^b + c$, where a, b, and c are predetermined constants.

64. (New) The method of claim 63, wherein b being greater than zero and less than 1.

65. (New) The method of claim 63, wherein b being greater than or equal to 0.25 and. less than or equal to 0.75.